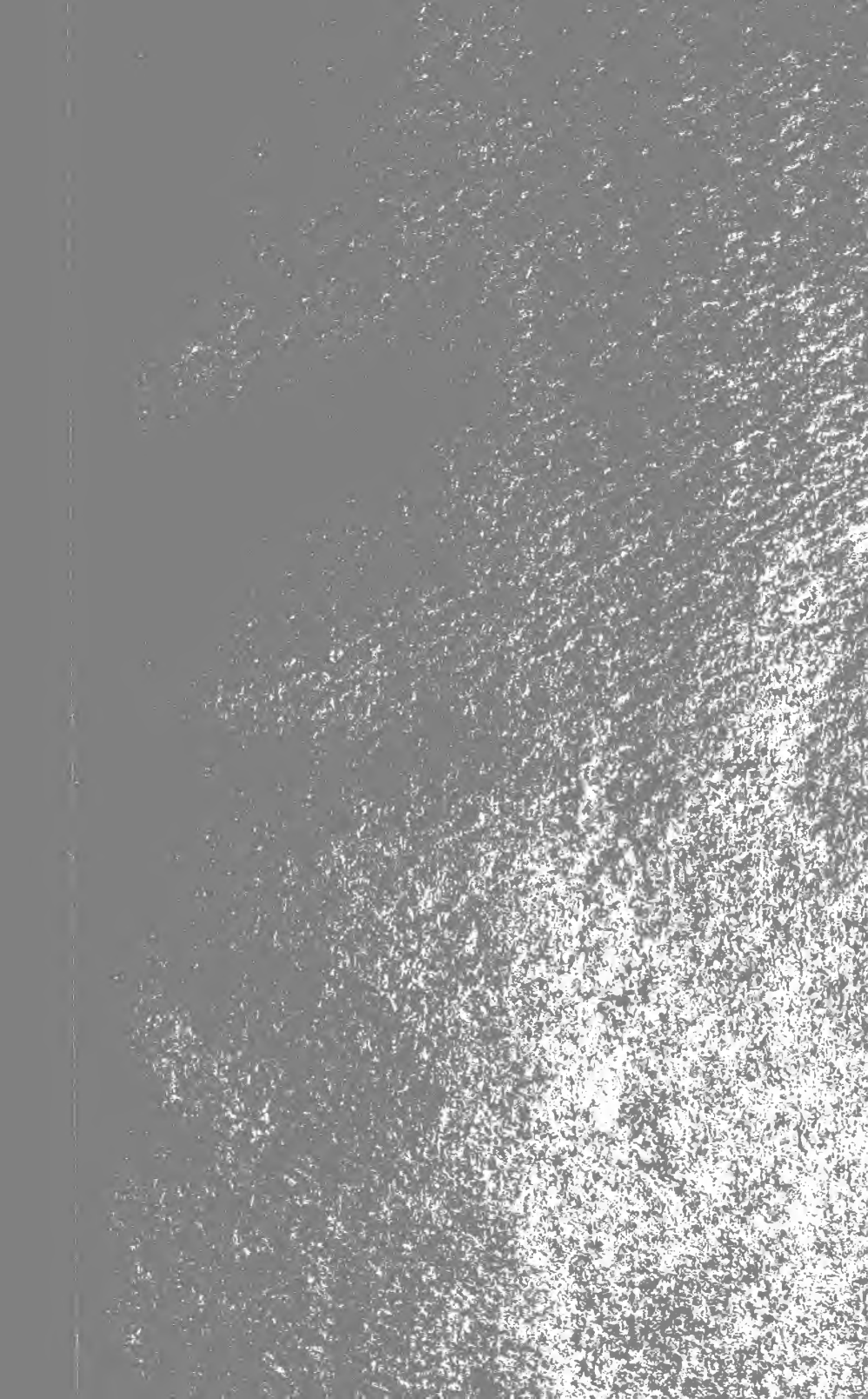

STANDARD PLANS

FOR

SMALL JAILS

Prepared by

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for the

State Board of Charities and Corrections

995 Market Street, San Francisco

1917

CALIFORNIA STATE PRINTING OFFICE
SACRAMENTO
1917

DESIGN FOR SMALL JAILS.

In buildings occupied by public institutions several points are to be considered, namely:

Ample air space for each occupant.
Sufficient ventilation.
Sanitary conveniences.

In the planning of jail buildings, the security of the prisoners is an added consideration.

The accompanying is an illustration in which all of the above points have been carefully considered. In what follows, these points, with a description of the various materials, their kind and quantity, will be taken up in rotation, together with other things to be considered in the planning of small jail buildings.

LOCATION: The location chosen should be on high, well-drained land, easily accessible and adjacent to a sewer and water supply.

SIZE OF BUILDING: Seven hundred and fifty cubic feet of air space has been allowed for each one of the eight inmates. This gives a building whose inside dimensions are 22 feet by 22 feet and 12 feet in height at the low point of the roof.

DIVISION IN BUILDING: The building has been divided into two main compartments for the prisoners and a smaller compartment for the use of the jailer. In the prisoner's room, a small portion has been partitioned off for the sanitary fixtures.

MATERIALS OF CONSTRUCTION: Concrete has been chosen as the best material for the construction of such buildings, as it has great durability, is hard, low in cost, and the finished product offers small chance for the propagation of vermin. The entire inside of the building may be washed by means of a hose or disinfected by gas without damaging the building in any way. Its hardness and the smoothness of the walls offer the most resistance to efforts at escape by the prisoners.

The amount of concrete involved in the construction of the building is approximately fifty-two (52) cubic yards, which should consist of one (1) part of Portland cement, tested to conform to the requirements of the American Society of Testing Materials for Portland cement, two (2) parts of clean fresh water sand and four (4) parts of rock crushed to sizes varied from one-quarter ($\frac{1}{4}$) in the smallest dimensions to three-quarters ($\frac{3}{4}$) in the largest dimension. Screened fresh water gravel may be used if same is hard and free from clay and debris.

The floor slab is three (3) inches thick, finished with one-half ($\frac{1}{2}$) inch of one (1) part of Portland cement to two and one-half ($2\frac{1}{2}$) parts of screened gravel in sizes varying from sand to one-quarter ($\frac{1}{4}$) of an

inch. There is about four hundred and eighty-five (485) square feet of this finish.

The walls are in the main six (6) inches thick with the necessary increased thickness, where shown on the plans, for architectural and constructional purposes. These walls may be left either in the rough or finished in various ways according to the desires of the township officials. The outside faces may be bush hammered, plastered or painted, while the best finish for the inside is plaster. All plaster should be cement plaster, not less than three-eighths ($\frac{3}{8}$) of an inch thick, composed of one (1) part of Portland cement to two and one-half ($2\frac{1}{2}$) parts of fresh water sand applied in one (1) coat. If it is desired to paint the walls, the best paint to use is one of the standard brands of cement paint, obtainable in any color. The building contains approximately two hundred and seventy-five (275) square yards outside and inside requiring plastering or painting.

The roof is three (3) inches thick, supported on the side walls and two (2) concrete beams as shown. The top surface of the roof is finished smooth to receive the roofing. This roofing should be three (3) or four (4) plys of fourteen (14) pound saturated felt, well moped to the concrete and to each other, with hot asphaltum. The top ply should be flooded with hot asphalt, and while the asphaltum is still soft, gravel should be embedded therein, using as much gravel as the asphalt will hold. There are approximately five (5) squares of roofing. The roof should drain to the four corners and through the walls direct on the ground.

In portions of the state that have exceedingly hot summers a false roof of wood can be built over this roof to form a ventilating space. Such a covering should be kept off of the main roof as far as possible and be constructed of one (1) inch by six (6) inch boards laid with a one-half ($\frac{1}{2}$) inch space between to allow the water to drain on the main roof. These boards can be supported by two (2) inch by six (6) inch joists which in turn are supported on plates and studs as shown in the drawing.

Reinforcing: The concrete in the walls and roof are reinforced with steel bars of size and spacing shown on the plans. This reinforcing steel should be tested to the requirements of the American Society of Testing Materials standards for reinforcing steel and should be deformed bars unless otherwise noted. The building requires approximately thirty-six hundred (3,600) pounds of reinforcing bars of various sizes.

Forms: The forms for the walls and roof slab should be made of one (1) inch material surfaced on one (1) side and two (2) edges

properly held and braced in place with two (2) inch by four (4) inch supports and should be well aligned and to the required dimensions. Before pouring the concrete, all shavings and other debris must be removed and the forms well soaked with water in order to close the cracks as much as possible. No large cracks must occur to allow the escape of the finer portions of the concrete aggregate. The area of forms is about four thousand one hundred and fifty (4,150) square feet of concrete contact.

WINDOWS: In order that sufficient ventilation may be had, ten (10) openings of seven and one-half ($7\frac{1}{2}$) square feet area are provided with two (2) openings in the walls of the jailer's room to provide circulation. All openings are provided with a grill made up of five-eighths ($\frac{5}{8}$) inch round bars placed about six (6) inches on centers and tied together top and bottom with a one and one-half ($1\frac{1}{2}$) by three-eighths ($\frac{3}{8}$) inch flat iron. The projecting ends of the bars are embedded in the concrete not less than six (6) inches and meshed with the wall reinforcing steel in the manner shown on the large detail. Outside of these bars screens are placed to prevent the entrance of guns, etc., mosquitoes and other insects. The screens should be made of copper or should be galvanized and painted in order to increase their life. Outside of the screens are the window sash themselves. These should be made of sugar pine, one and one-quarter ($1\frac{1}{4}$) inches thick, of the sizes shown, and glazed with sixteen (16) ounce sheet glass. The frames for the sash should be of pine and provided with stops and weight pockets so that the sash may be raised and lowered at will. It is intended to operate the sash from the outside of the building by means of a window pole. The window openings are to be placed above the height of a man's head to prevent the curious from looking in and also to prevent the inmates from talking with people on the outside. In order to prevent the inmates from getting a hold on the sill and raising themselves to the opening, the inside sills are sloped downward at a sharp angle. The two (2) openings into the jailer's room have no sash or screens.

ALL DOORS: Two (2) jail doors are required. These doors are two (2) feet six (6) inches wide by six (6) feet eight (8) inches high and should have a six (6) inch channel frame fitting into the concrete walls. The doors themselves should be made of three-sixteenths ($\frac{3}{16}$) inch steel plate with a large grating at the top and a small one at the bottom. The locks can be any one of the standard locks of the spring latch type so that they will lock upon closing the doors.

ACCOMMODATIONS FOR THE PRISONERS: The bunks recommended are those constructed of two (2) inch iron pipe with canvas strapped in between the horizontal runs. This type of bunk can be easily cleaned

and prevents the development of vermin and filth. The vertical standard should run from the floor to the ceiling and be fastened to both. Since the bunks must be double, one of the runs is placed two (2) feet six (6) inches from the floor and the other about six (6) feet from the floor.

Seats must be provided, but should be fixed to the walls or floor. These, two (2) in number, may be of wood, eighteen (18) inches wide and (6) feet long. A fixed shelf is provided, placed breast high to act as a table.

Sanitary Requirements: Three (3) fixtures are provided for each room: toilet, wash sink and shower. The toilets should be a good, durable fixture of the syphon jet type with a large throat, but no wood seat should be allowed. The tank for this fixture is placed in the jailer's room with the flushing lever projecting through the wall, in order to prevent prisoners from securing the metal parts and also that the fixture may be flushed from the outside. The sink is of the slop sink type, about twelve (12) inches by twenty (20) inches and fifteen (15) inches deep. This is necessary in order that the inmates may wash their clothes as well as their hands and faces. A shower is provided for bathing and should be placed above the reach so as not to be torn off. The floor sump should be placed under the shower and the whole floor sloped so as to drain into this. The shower valves should have only the spindle projecting into the room, but the bibb on the sink must be such that a hose can be fastened thereto for washing out the room. All of the above fixtures should be connected to the sewer and properly trapped and inspected.

The portion of the room containing the fixtures is partitioned off from the balance of the room by a screen. This screen may be of wood or metal and should be about six (6) feet in height and must be one (1) inch off the floor in order that the water may drain under. If of wood, one (1) inch tongue and groove pine, surfaced on both sides and provided with a top and bottom rail, is all that is required. If of metal, the plate should be about one-eighth ($\frac{1}{8}$) inch thick secured in place by a pipe or channel frame.

Jailer's Room: Provide a cabinet on each side of the room with shelves, drawers, and glass paneled doors. In one of the cabinets a desk should be built in for writing purposes.

The main entrance door is of wood two (2) inches thick, and provided with a good type of cylinder lock, heavy hinge, and a transom for light and ventilation. The transom is provided with an operator on the inside. Over the front door a wood canopy can be provided if desirable for architectural reasons.

Artificial Lighting: One (1) fixture of one hundred (100) watts is provided in each room. In the cells these outlets should be placed in

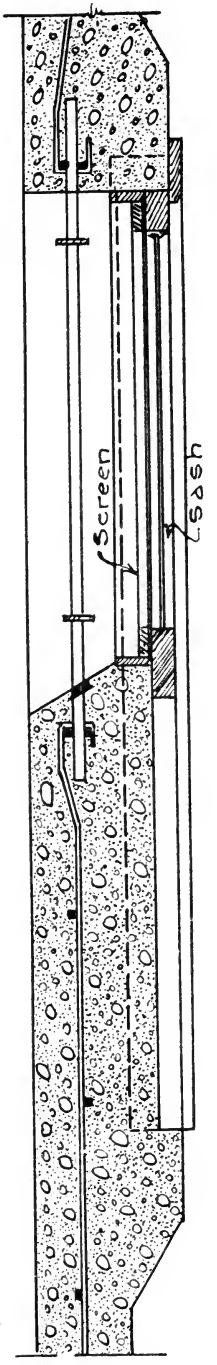
the ceiling out of reach of the inmates standing on the bunk, the socket being buried in the concrete, and heavy wire screen guards placed around the globes. The lights are operated from the jailer's room. The light in the jailer's room may be suspended by a cord and should be provided with a screen guard and a separate switch near the entrance door.

PAINTING: In addition to the painting previously mentioned, all woodwork must have three coats of pure lead and linseed oil, colored as desired. The color best for the inside of the jail rooms is a light gray. The front of the building can be treated in any manner desired for architectural purposes, but no openings other than the door should be placed in this face.

HEATING: Provisions for heating of the building must be made. The heating can be accomplished by the use of gas or a stove. The former is the best, but the control should be placed in the jailer's room and the grate should be of cast iron, built into the walls and well vented, with no loose parts that may be taken off and used as a means of escape or attack on the jailer.

If a stove is used, this should be a sheet iron stove without heavy parts, and should be riveted together. The top should be nondetachable and the pipe rigidly fastened to the walls of the building. Where the pipe passes through the roof, a terra cotta flue should be provided of sufficient length to be well above the composition roof, and must have a spark-destroying top.

With the use of gas, only one stove is necessary. This can be placed in an opening in the division wall common to both rooms. In case of a stove, two will be necessary, one in each room.



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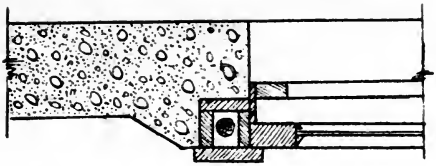

SECTION C-C

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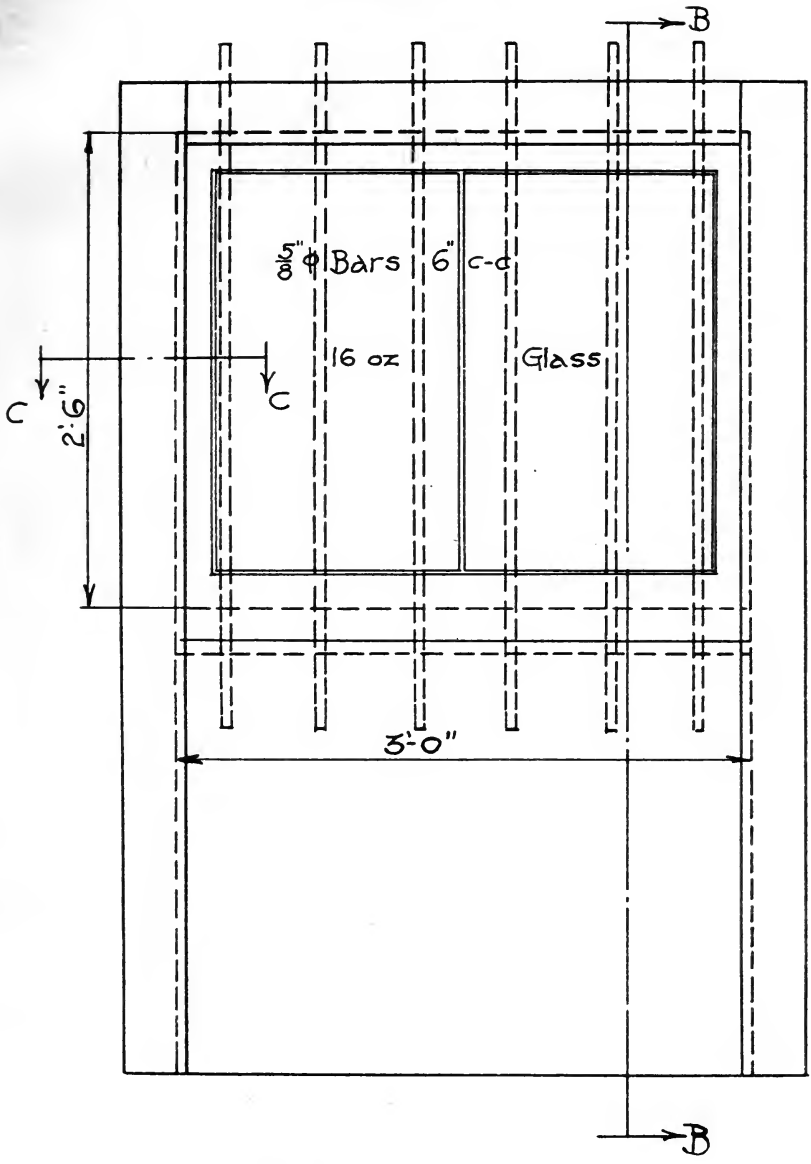

DETAIL OF WINDOW

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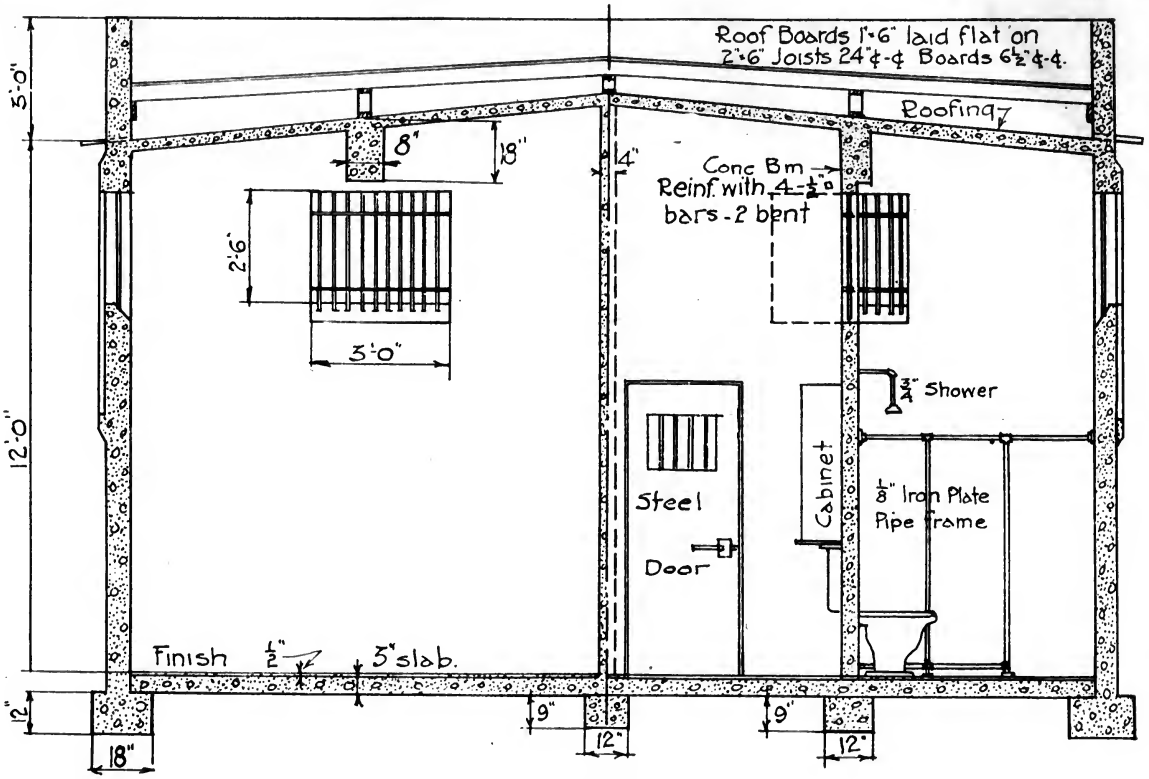

SECTION "A-A"

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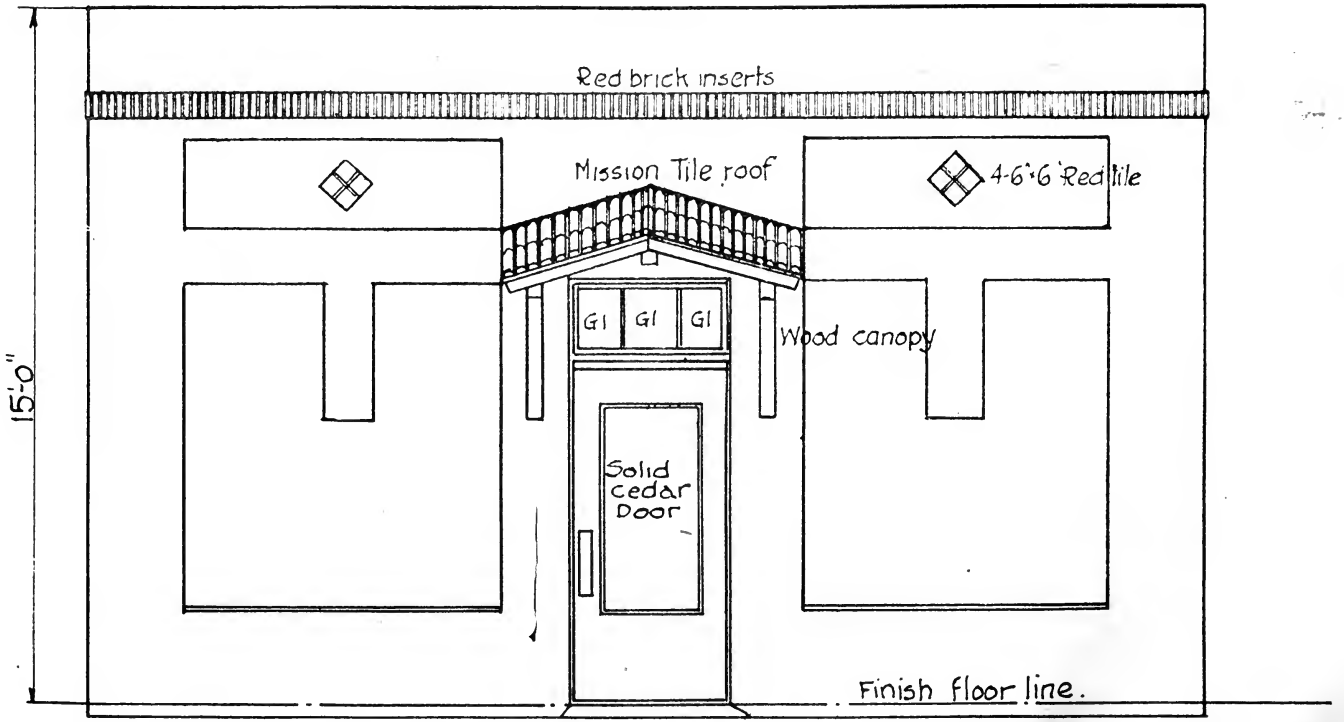

FRONT ELEVATION.

Scale ¼" = 1'-0"